

## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,724	11/19/2003	Richard N. Codos	LPPT-13E	6316
75	90 12/14/2005		EXAM	INER
WOOD, HERRON & EVANS, L.L.P.			TRAN, LY T	
2700 Carew Tower 441 Vine St.			ART UNIT	PAPER NUMBER
Cincinnati, OH 45202			2853	<del>.</del>
		DATE MAILED: 12/14/2005		

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary    Examiner		Application No.	Applicant(s)				
Examiner   Ly T. TRAN   2553							
LyT.TRAN   2853	Office Action Summary		·				
The MALING DATE of this communication appears on the cover sheet with the correspondence address - Period for Reply  A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MALINIG DATE OF THIS COMMUNICATION.  Extensions of term may be available under the provision of 37 CPR 1-1806, no nevest, however, may a regly be threely filed  If NO period for regly is specified above, the maximum situation period will apply and well expire 31X (8) MONTHS from the mating date of this communication.  Fallule to travely whethin the set or canded point of for regival lity between cause the application become ARAPRODOCI 30 U.S.C. \$ 1330, Party regly revelved by the office liter than these manufactured. See 27 CPR 1-1804.  1) □ Responsive to communication(s) filled on 04 October 2005.  2a) □ This action is FINAL.  2b) □ This action is non-final.  3) □ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4) □ Claim(s) 3.4.6.8.15.17-20.24.26-28.31-34.36.38.41.42 and 50-52 is/are pending in the application.  4a) Of the above claim(s) is/are allowed.  6) □ Claim(s) 3.4.6.7.7-20.24.26-28.31-34.36.38.41.42 and 50-52 is/are rejected.  7) □ Claim(s) is/are allowed.  6) □ Claim(s) 3.4.6.7.7-20.24.26-28.31-34.36.38.41.42 and 50-52 is/are rejected.  7) □ Claim(s) is/are allowed.  8) □ Claim(s) 3.4.6.7.7-20.24.26-28.31-34.36.38.41.42 and 50-52 is/are rejected.  7) □ The drawing(s) filed on is/are: a) □ accepted or b) □ objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) □ The drawing(s) filed on is/are: a) □ accepted or b) □ objected to by the Examiner.  Applicant may not request that any objection to t	• • • • • • • • • • • • • • • • • • •	İ					
Period for Reply  A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  ■ Seterations of them may be available under the prevailors of 37 CFR 1.136(a), his access, however, may a reply be limitely filed at Seteration of them the mailing date of this communication or reply is specified between the mailing date of this communication or reply is specified by the Mile above, the maximum statulary period wall apply and will capies (X6) MONTHS from the mailing date of this communication, even if timely filed, may reduce any control plant from the specified or reply will, by statule, cause the application to become ARANDONED (38 U.S. C; § 133). Any poly recently the office for the ball between robusts.  1) □ Responsive to communication(s) filed on 04 October 2005.  2a) □ This action is FINAL. 2b) □ This action is non-final.  3) □ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4) □ Claim(s) 3.4.6-8.15.17-20.24.26-28.31-34.36.38.41.42 and 50-53 is/are pending in the application.  4a) Of the above claim(s) is/are withdrawn from consideration.  5) □ Claim(s) is/are allowed.  6) □ Claim(s) 3.4.6-8.15.17-20.24.26-28.31-34.36.38.41.42 and 50-53 is/are rejected.  7) □ Claim(s) is/are objected to.  8) □ Claim(s) is/are objected to.  9) □ The specification is objected to by the Examiner.  10) □ The drawing(s) filed on is/are: a) □ accepted or b) □ objected to by the Examiner.  Application Papers  9) □ The specification is objected to by the Examiner. Note the altached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12 □ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) □ All b) □ Some * c) □ None of:  1 □ Certified copies of the priority documents have been received in Application No. □ 1.	The MAII ING DATE of this communication and						
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  Eletroistor of time may be available under the provisions of 3 PCR 1.13(6). In a event, however, may a regity be timely filed after SIX (6) MONTIS from the mailing date of this communication.  Fallists to received by the Citica batter than these months after the mailing date of this communication.  Fallists to reverse within the cat or controlled partied for reyval. Iby station, caucine the application become ABANDOFIC 3U S.C. 8; 133). Any reply received by the Citica batter than these months after the mailing date of this communication, even if timely filed, may reduce any carried patter time adjustment. See 37 CFR 1.74(b).  Status  1) □ Responsive to communication(s) filed on 04 October 2005.  2a) □ This action is FINAL.  2b) □ This action is non-final.  3) □ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4 ○ Claim(s) 3.4.6.8.15.17-20.24.26-28.31-34.36.38.41.42 and 50-53 is/are pending in the application.  4a) Of the above claim(s) is/are objected to.  5 □ Claim(s) is/are allowed.  Claim(s) is/are allowed.  Claim(s) is/are objected to.  5 □ Claim(s) is/are objected to.  5 □ Claim(s) is/are objected to.  5 □ Claim(s) is/are objected to.  10 □ The drawing(s) filed on is/are: a) □ accepted or b) □ objected to by the Examiner.  Application Papers  9 □ The specification is objected to by the Examiner.  10 □ The drawing(s) filed on is/are: a) □ accepted or b) □ objected to by the Examiner.  Application Papers  9 □ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12 □ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  3 □  □ Acknowledgment is made of a claim for foreign priority under 35 U.							
1)⊠ Responsive to communication(s) filed on <u>04 October 2005</u> .  2a)□ This action is FINAL. 2b)⊠ This action is non-final.  3)□ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4)☑ Claim(s) <u>3.4.6-8.15.17-20.24.26-28.31-34.36.38.41.42 and 50-53</u> is/are pending in the application.  4a) Of the above claim(s) <u>is/are</u> allowed.  6)☑ Claim(s) <u>3.4.6-8.15.17-20.24.26-28.31-34.36.38.41.42 and 50-53</u> is/are rejected.  7)□ Claim(s) <u>is/are</u> objected to.  8)□ Claim(s) <u>are</u> subject to restriction and/or election requirement.  Application Papers  9)□ The specification is objected to by the Examiner.  10)□ The drawing(s) filed on <u>is/are</u> : a)□ accepted or b)□ objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11)□ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12)□ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a)□ All b)□ Some * c)□ None of:  1.□ Certified copies of the priority documents have been received.  2.□ Certified copies of the priority documents have been received in Application No  3.□ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(e)  1) ☑ Notice of Preferences Cited (PTO-892)  3)□ Information Disclosure Statement(e) (PTO-1449 or PTO/SB00)	WHICHEVER IS LONGER, FROM THE MAILING DA  - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period w  - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing	ATE OF THIS COMMUNICATION 16(a). In no event, however, may a reply be tim rill apply and will expire SIX (6) MONTHS from to cause the application to become ABANDONED	L. lely filed the mailing date of this communication.				
2a)  This action is FINAL. 2b)  This action is non-final.  3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4)  Claim(s) 3.4.6-8.15.17-20.24.26-28.31-34.36.38.41.42 and 50-53 is/are pending in the application.  4a) Of the above claim(s) is/are withdrawn from consideration.  5)  Claim(s) is/are allowed.  6)  Claim(s) is/are objected to.  8)  Claim(s) is/are objected to.  8)  Claim(s) is/are objected to.  8)  Claim(s) are subject to restriction and/or election requirement.  Application Papers  9)  The specification is objected to by the Examiner.  10)  The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a)  All b)  Some * ○) None of:  1.  Certified copies of the priority documents have been received.  2.  Certified copies of the priority documents have been received in Application No  3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  3)  Notice of Informal Patent Application (PTO-152)	Status						
3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4)  Claim(s) 3.4.6.8.15.17-20.24.26-28.31-34.36.38.41.42 and 50-53 is/are pending in the application.  4a) Of the above claim(s) is/are withdrawn from consideration.  5)  Claim(s) is/are allowed.  6)  Claim(s) is/are allowed.  7)  Claim(s) is/are objected to.  8)  Claim(s) is/are objected to.  8)  Claim(s) are subject to restriction and/or election requirement.  Application Papers  9)  The specification is objected to by the Examiner.  10)  The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a)  All b)  Some * c)  None of:  1.  Certified copies of the priority documents have been received.  2.  Certified copies of the priority documents have been received in Application No  3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1)  Notice of Draftsperson's Patent Drawing Review (PTO-948) on PTO/5808)  5)  Notice of Informal Patent Application (PTO-152)	1) Responsive to communication(s) filed on 04 Oc	<u>ctober 2005</u> .					
closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4)	2a) ☐ This action is <b>FINAL</b> . 2b) ☒ This	This action is <b>FINAL</b> . 2b)⊠ This action is non-final.					
Disposition of Claims  4)	3) Since this application is in condition for allowan	] Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
4)	closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.						
4a) Of the above claim(s) is/are withdrawn from consideration.  5) □ Claim(s) is/are allowed.  6) ☒ Claim(s) 3_4.6-8.15_17-20_24_26-28_31-34_36_38_41_42_and_50-53_is/are rejected.  7) □ Claim(s) is/are objected to.  8) □ Claim(s) are subject to restriction and/or election requirement.  Application Papers  9) □ The specification is objected to by the Examiner.  10) □ The drawing(s) filed on is/are: a) □ accepted or b) □ objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) □ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) □ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) □ All b) □ Some * c) □ None of:  1. □ Certified copies of the priority documents have been received.  2. □ Certified copies of the priority documents have been received in Application No  3. □ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) ☑ Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) □ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  5) ☑ Notice of Informal Patent Application (PTO-152)	Disposition of Claims						
5)  Claim(s) is/are allowed. 6)  Claim(s) 3_4.6-8_15_17-20_24_26-28_31-34_36_38_41_42_and_50-53_ is/are rejected. 7)  Claim(s) is/are objected to. 8)  Claim(s) are subject to restriction and/or election requirement.  Application Papers  9)  The specification is objected to by the Examiner. 10)  The drawing(s) filed on is/are: a)  accepted or b)  objected to by the Examiner.   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).   a)  All  b)  Some * c)  None of:   1.  Certified copies of the priority documents have been received.   2.  Certified copies of the priority documents have been received in Application No   3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1)  Notice of Draftenese Cited (PTO-892)  Paper No(s)/Mail Date  Paper No(s)/Mail Date  5)  Notice of Informal Patent Application (PTO-152)	4)⊠ Claim(s) 3,4,6-8,15,17-20,24,26-28,31-34,36,38,41,42 and 50-53 is/are pending in the application.						
6   Claim(s) 3.4.6-8.15.17-20.24.26-28.31-34.36.38.41.42 and 50-53 is/are rejected.  7)   Claim(s)	4a) Of the above claim(s) is/are withdrawn from consideration.						
7)	5) Claim(s) is/are allowed.						
Application Papers  9) The specification is objected to by the Examiner.  10) The drawing(s) filled on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  5) Notice of Informal Patent Application (PTO-152)	6) Claim(s) <u>3,4,6-8,15,17-20,24,26-28,31-34,36,3</u>	i)⊠ Claim(s) <u>3,4,6-8,15,17-20,24,26-28,31-34,36,38,41,42 and 50-53</u> is/are rejected.					
Application Papers  9) ☐ The specification is objected to by the Examiner.  10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) ☐ All b) ☐ Some * c) ☐ None of:  1. ☐ Certified copies of the priority documents have been received.  2. ☐ Certified copies of the priority documents have been received in Application No  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) ☑ Notice of References Cited (PTO-892)  2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)		Claim(s) is/are objected to.					
9)  The specification is objected to by the Examiner.  10)  The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	8) Claim(s) are subject to restriction and/or election requirement.						
10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) Notice of References Cited (PTO-892)  2 Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  5) Notice of Informal Patent Application (PTO-152)	Application Papers						
10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) Notice of References Cited (PTO-892)  2 Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  5) Notice of Informal Patent Application (PTO-152)							
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No.  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	,— ,						
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) ☐ All b) ☐ Some * c) ☐ None of:  1 ☐ Certified copies of the priority documents have been received.  2. ☐ Certified copies of the priority documents have been received in Application No  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) ☑ Notice of References Cited (PTO-892)  2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  1 Notice of Informal Patent Application (PTO-152)							
Priority under 35 U.S.C. § 119  12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) ☐ All b) ☐ Some * c) ☐ None of:  1 ☐ Certified copies of the priority documents have been received.  2 ☐ Certified copies of the priority documents have been received in Application No  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) ☑ Notice of References Cited (PTO-892)  2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  5) ☐ Notice of Informal Patent Application (PTO-152)	Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).						
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.						
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	Priority under 35 U.S.C. § 119						
a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  4) Interview Summary (PTO-413) Paper No(s)/Mail Date  5) Notice of Informal Patent Application (PTO-152)	<u>.                                      </u>						
1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)    Notice of References Cited (PTO-892)							
2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  1 Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)							
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) ☑ Notice of References Cited (PTO-892) 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  5) ☐ Notice of Informal Patent Application (PTO-152)							
* See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  1) Notice of References Cited (PTO-892)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  * See the attached detailed Office action for a list of the certified copies not received.  4) Interview Summary (PTO-413) Paper No(s)/Mail Date.  5) Notice of Informal Patent Application (PTO-152)							
Attachment(s)  1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  4) Interview Summary (PTO-413) Paper No(s)/Mail Date  5) Notice of Informal Patent Application (PTO-152)	application from the International Bureau (PCT Rule 17.2(a)).						
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) 4) Interview Summary (PTO-413) Paper No(s)/Mail Date. 5) Notice of Informal Patent Application (PTO-152)	* See the attached detailed Office action for a list of the certified copies not received.						
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) 4) Interview Summary (PTO-413) Paper No(s)/Mail Date. 5) Notice of Informal Patent Application (PTO-152)							
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) 4) Interview Summary (PTO-413) Paper No(s)/Mail Date. 5) Notice of Informal Patent Application (PTO-152)							
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) 4) Interview Summary (PTO-413) Paper No(s)/Mail Date. 5) Notice of Informal Patent Application (PTO-152)	Attachment(s)						
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  5) Notice of Informal Patent Application (PTO-152)	1) Notice of References Cited (PTO-892)  4) Interview Summary (PTO-413)						

Application/Control Number: 10/716,724

Art Unit: 2853

## **DETAILED ACTION**

## Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 1. Claims 3, 4, 6-8, 15-19, 28, 34-36, 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwede (USPN 5,757,389).

With respect to claims 3, 4, 6-8, 15-19, 28, 34-36, 50-53, Schwede discloses a method for printing on a substrate comprising moving multiple head mounted on the carriage, having at least one ink jet nozzle thereon, parallel to a plane in which is support a substrate having a surface that is at a non-uniform location, adjust the distance and jetting ink on the surface of the substrate (Fig.1, Column 2: line 45-67, Column 8: line 52-54), sensor to determined the distance (Column 2; line 62-63), automatically adjusts the distance from the nozzle to the surface being printed (Column 6: line 43-45 and Column 1: line 41-63) by measuring the distance from the surface being printed to the print head with a distance sensor (Column 2: line 64). The distance sensor senses the contours of the surface being printed (Column 6: line 54-63) and adjusts the distance between the print head and the surface being printed, control unit (Column 3: line 40-42), signal instruct the motor to adjust the position of the heads (Column 3: line 38-67, Column 4: line 5-37).

Application/Control Number: 10/716,724

Art Unit: 2853

2. Claims 24, 31-33, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwede et al. (USPN 5,757,389) in view of Stellmach et al. (USPN 5,172,987).

Schwede teach the transmitting of the thickness information (Column 3: line 40-60).

However, Schwede fails to teach two sensors are mounted on the carriage and the sensor includes an indicator roller and the heads transversely on the carriage relative to the substrate.

Stellmach teaches two sensors are mounted on the carriage and the sensor includes an indicator roller (Column 6: line 59-62, Column 6: line 3-9) roller and the heads transversely on the carriage relative to the substrate Column 9: line 60-65).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a roller sensor as taught by Stellmach. The motivation of doing so is to jolting the print head.

3. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwede et al. (USPN 5,757,389) in view of Fassler et al. (USPN 5,910,813).

Schwede discloses a sensor to detect the position of the surface of the substrate (Fig.1: element 14) and a table to support the substrate (Fig.1).

However, Schwede fails to teach non-flexible substrate.

Fassler shows that flexible and rigid substrate is an equivalent structure known in the art. Therefore, because flexible and rigid were art recognized equivalents at the

Art Unit: 2853

time the invention was made, one of ordinary skill in the art would have found it obvious to substitute rigid substrate for flexible substrate.

4. Claims 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwede (USPN 5,757,389) in view of Stellmach et al. (USPN 5,172,987) as applied to claim 34 above, further in view of Fassler et al. (USPN 5,910,813).

The combination fo Schwede and Stellmach discloses a table to support the substrate (Fig.1).

However, Schwede and Stellmach fails to teach non-flexible substrate.

Fassler shows that flexible and rigid substrate is an equivalent structure known in the art. Therefore, because flexible and rigid were art recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute rigid substrate for flexible substrate.

5. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwede (USPN 5,757,389) in view of Smith (6,637,958).

Schwede discloses the claimed invention except for using a servo- motor instead of a motor. Smith shows that a motor and a servo-motor is an equivalent structure known in the art. Therefore, because the motor and the servo motor were art recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute a servo motor for a motor for the same purpose such as to activating the machine.

Art Unit: 2853

## Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ly T. TRAN whose telephone number is 571-272-2155. The examiner can normally be reached on M-F (7:30am-5pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LT

December 9, 2005

Stephen D. Meier Primary Examiner